Amendments to the Specification:

After Page 54, please add the attached abstract.

Please replace the paragraph on page 1, lines 1-9 with the following paragraph:

This is a divisional application of U.S. Application 10/270,595 (filed October 16, 2002), now allowed, which is a divisional application of U.S. Application 09/623,624 (filed February 13, 2001, now U.S. Patent 6,576,434, issued June 10, 2003), which is a U.S. National Phase Application of International Application PCT/US99/04703 (filed March 3, 1999), which claims the benefit of U.S. Provisional Application 60/076,815 (filed March 3, 1998), all of which are herein incorporated by reference in their entirety.

Please replace the paragraph on page 7, lines 26-27 with the following amended paragraph:

~~Figure 2 shows~~ Figures 2A-2F show the nucleotide (SEQ ID NO:1) and amino acid (SEQ ID NO:2) sequence of the murine ICACC-1 cDNA.

Please replace the paragraph on page 7, lines 28-29 with the following amended paragraph:

~~Figure 3 shows~~ Figures 3A-3D show an alignment of the murine ICACC-1 protein with bovine calcium activated chloride channel.

Please replace the paragraph bridging page 7, line 30 through page 8, line 1 with the following amended paragraph:

~~Figure 4A shows~~ Figures 4A1-4A6 show the nucleotide (SEQ ID NO: 3) and amino acid (SEQ ID NO: 4) sequence of the human ICACC-2 cDNA.

Please replace the paragraph on page 8, lines 2-3 with the following amended paragraph:

~~Figure 4B shows~~ Figures 4B1-4B6 show the nucleotide (SEQ ID NO:5) and amino acid (SEQ ID NO:6) sequence of the human ICACC-1 cDNA.

Please replace the paragraph on page 8, lines 4-5 with the following amended paragraph:

~~Figure 5 shows~~ Figures 5A-5F show an alignment of the murine ICACC-1 protein with the human ICACC-1 and ICACC-2 protein.

Please replace the paragraph on page 8, lines 11-12 with the following amended paragraph:

~~Figure 9 shows~~ Figures 9A-9B show the expression of ICACC-1 in tissues from normal (Balb/C) and IL-9 overexpressing (Tg5) mice.

Please replace the paragraph on page 8, lines 13-14 with the following amended paragraph:

~~Figure 10 shows~~ Figures 10A-10B show Aspergillus fumagatus-antigen induced BHR and eosinophilia in Balb/C mice.

Please replace the paragraph on page 8, lines 17-18 with the following amended paragraph:

~~Figure 12 shows~~ Figures 12A-12B show the suppression of BHR and lung eosinophilia by anti-IL9 in mice exposed to Aspergillus fumagatus.

Please replace the paragraph bridging page 11, line 14 through page 12, line 3 with the following amended paragraph:

The murine ICACC-1 gene was identified by subtractive cDNA cloning experiments that were performed in order to identify genes specifically induced by IL-9. A schematic diagram of the subtractice cDNA cloning method is provided in Figure 1. RNA derived from lungs of transgenic mice overexpressing the murine IL-9 transgene (Tg5) was used to isolate genes expressed in response to IL-9 as opposed to those which are not expressed in the parental strain (FVB). Figure 6 shows a Northern blot with RNA from a lung of a Tg5 mouse (right lane) and a FVB mouse (left lane) demonstrating these findings. Expression of ICACC-1 was also observed in the lung of the DBA murine strain which has been shown to express elevated baseline IL-9 levels in their lungs (Figure 7). ICACC-1 expression was not observed in the ungs of the C57B6 strain where IL-9 expression is below the limits of detection (Figure 7) (Nicolaides *et al.*, 1997). The direct effect of IL-9 on inducing ICACC-1 expression was demonstrated when IL-9 was instilled into the trachea of the C57B6 mouse. The results of this experiment demonstrated that ICACC-1 was expressed in the lungs of the IL-9 instilled mice but not in naïve or vehicle treated mice (Figure 8), indicating that this gene is induced by IL-9. The results also show that ICACC-1 gene expression is induced in the lung of antigen exposed mice which exhibit asthmatic-like features (BHR, lung eosinophilia) ~~(Figures 10 and 12)~~ (Figures 10A-10B and 12A-12B). The antigen induced BHR and lung eosinophilia can be suppressed in mice by treatment with anti-IL9 ~~(Figure 12)~~ (Figures 12A-12B), which also results in down regulation of ICACC-1 (Figure 13).

Please replace the paragraph on page 12, lines 4-12 with the following amended paragraph:

The murine ICACC-1 gene displayed significant homology (~50%) with a member of the bovine calcium activated chloride channel family ~~(Figure 3)~~ (Figures 3A-3D) (Cunningham *et al.*, 1995). The full length cDNA was cloned from a murine cDNA library ~~(Figure 2)~~ (Figures 2A-2F). Several EST were identified which displayed partial homology to the murine ICACC-1. These EST were obtained from the IMAGE consortium (Lawrence Livermore National Laboratory) and sequenced. A full length cDNA sequence was isolated for human ICACC-1 and 2 by library screening and 5' -and '3 RACE cloning (Clonetech). Analysis of the encoded murine protein sequence identified several conserved motifs including multiple transmembrane domains and several phosphorylation and glycosylation sites.

Please replace the paragraph on page 12, lines 13-19 with the following amended paragraph:

Expression of murine ICACC-1 was undetectable using standard commercial tissue blots but elevated expression of ICACC-1 was observed in lung, lymph node, colon, spleen, stomach, uterus and ovary derived from IL-9 transgenic mice ~~(Figure 9)~~ (Figures 9A-9B). Interestingly, these tissues all contain various epithelial cell types, suggesting that this gene may be restricted to IL-9 responsive epithelial cells. This data is supported by the finding that ICACC-1 gene expression is induced in antigen exposed mice and this induction can be suppressed by anti-IL9 treatment ~~(Figures 10, 12, and 13)~~ (Figures 10A-10B, 12A-12B and 13).

Please replace the paragraph on page 14, lines 13-20 with the following amended paragraph:

The present invention further provides fragments of the encoding nucleic acid molecule. As used herein, a fragment of an encoding nucleic acid molecule refers to a small portion of the entire protein encoding sequence. The size of the fragment will be determined by the intended use. For example, if the fragment is chosen so as to encode an active portion of the protein, the fragment will need to be large enough to encode the function region(s) of the protein or may encode regions of homology between the ICACC proteins in ~~Figure 5~~ Figures 5A-5F. If the fragment is to be used as a nucleic acid probe or PCR primer, then the fragment length is chosen so as to obtain a relatively small number of false positives during probing/priming.

Please replace the paragraph on page 36, lines 8-18 with the following amended paragraph:

The 2931 bp cDNA isolated contained an open reading frame encoding a protein of 925 amino acids. ~~Figure 2 shows~~ Figures 2A-2F show the nucleotide and amino acid sequence of the murine ICACC-1 cDNA. A nucleotide BLAST (Altschul *et al.*, 1990) database search of GenBank with the full length cDNA revealed that it was similar to the bovine chloride channel protein. ~~Figure~~

~~3 shows~~ Figures 3A-3D show an alignment to the bovine calcium activated chloride channel cDNA. Motif analysis of the encoded polypeptide demonstrated several features such as multiple transmembrane regions and glycosylation sites. The primary sequence of murine ICACC-1 was used to perform an EST database search and several undescribed human ESTs were found to be homologous to small portions of the novel cDNA. ~~Figure 4A and 4B~~ Figures 4A1-4A6 and 4B1-4B6 show the sequences of the human ICACC-1 and ICACC-2 genes. Both full length human ICACC sequences were obtained by screening a human cDNA library.

Please replace the paragraph on page 38, lines 11-17 with the following amended paragraph:

Tissue blots were probed using a DNA fragment comprising the ICACC-1 cDNA. As shown in ~~Figure 9 (bottom)~~ Figure 9A, no signal was observed in any of the tissues present on blots from normal mice. Analysis of ICACC-1 expression in Tg5 organs revealed expression in the lung, lymph node, colon, spleen, stomach, ovary and uterus ~~(Figure 9, top)~~ (Figure 9B). This data demonstrated that ICACC-1 is expressed in several tissues in mice overexpressing IL-9 but not in those with low IL-9 levels. This data suggests that ICACC-1 may play a role in the physiology of these organs in response to IL-9.

Please replace the paragraph bridging page 38, line 19 through page 39, line 5 with the following amended paragraph:

Antigen ~~sensitzation~~ sensitization and phenotyping of animals was carried out as previously described (McLane, MP, *et al.* Am. J. Respir. Cell Mol. Biol. 19:713-720, (1998). Briefly, Balb/C mice were intranasally exposed to Aspergillus fumagatus for 3-4 weeks. One day after the final exposure, antigen exposed mice and naïve controls were phenotyped for bronchial hyperresponsiveness (BHR) and cellularity in the airway. After phenotyping, organs were removed and total RNA was prepared as described in Example 5 and ICACC-1 expression was accessed in naïve and antigen treated tissues. As shown in ~~Figure 10~~ Figures 10A and 10B, antigen exposed Balb/C mice had a significant increase in BHR (Figure 10A) and inflammatory cell influx (the majority being eosinophils) as compared to controls (Figure 10B). These features are very similar to clinical human asthma, and reinforce the notion that this is a relevant model to study molecular mechanisms and pharmaceutical target discovery for the development of asthma drugs. ICACC-1 gene expression was tightly associated with the asthmatic-like lung where robust expression was found in the antigen treated lung (bottom panel, Figure 11), while no expression was found in the naïve "normal" lung (top panel, Figure 11). These data suggest that: 1) ICACC-1 is a potential therapeutic target for the treatment of asthma, and 2) inhibiting the expression or function of ICACC-1 will result in no toxic effects to the lung.